

# FIGURE 1

GGCGTCCGCGCACACCTCCCCGCGCCGCGCCGCCACCGCCCGCACTCCGCGCGCTCTGCCCCGAACCGCT  
GAGCCATCCATGCGGGGTGCGGGGCCGCAACCGTCCCGGGGCGGCCTGGGCGGTGCTGCTGCTGCTGCTGCT  
GCTGCCGCACTGCTGCTGCTGGCGGGGGCCGTCCCGCCGGGTGCGGGGCCGTGCCGCGGGGCCGAGGAGG  
ATGTAGATGAGTGTGCCCCAAGGGCTAGATGACTGCCATGCCGACGCCCTGTGTGAGAACACACCCACCTCC  
TACAAGTGCTCCTGCAAGCCTGGCTACCAAGGGGAAGGCAGGCAGTGTGAGGACATCGATGAATGTGGAAA  
TGAGCTCAATGGAGGCTGTGTCCATGACTGTTTGAATATTTCCAGGCAATTATCGTTGCACTTGTTTTGATG  
GCTTCATGTTGGCTCATGACGGTCATAATTGTCTTGTATGTGGACGAGTGCCTGGAGAACAATGGCGGCTGC  
CAGCATACCTGTGTCAACGTCATGGGGAGCTATGAGTGTGCTGCAAGGAGGGGTTTTTCTGAGTGACAA  
TCAGCACACCTGCATTACCGCTCGGAAGAGGGCCTGAGCTGCATGAATAAGGATCACGGCTGTAGTCACA  
TCTGCAAGGAGGCCCAAGGGGCGAGCTCGCCTGTGAGTGCAGGCCTGGTTTTGAGCTGGCCAAGAACCAG  
AGAGACTGCATCTTGACCTGTAAACCATGGGAACGGTGGGTGCCAGCACTCCTGTGACGATACAGCCGATGG  
CCCAGAGTGCAGCTGCCATCCACAGTACAAGATGCACACAGATGGGAGGAGCTGCCTTGAGCGAGAGGACA  
CTGTCCCTGGAGGTGACAGAGAGCAACACCACATCAGTGGTGGATGGGGATAAACGGGTGAAACGGCGGCTG  
CTCATGGAAACGTGTGCTGTCAACAATGGAGGCTGTGACCGCACCTGTAAGGATACTTCGACAGGTGTCCA  
CTGCAGTTGTCTGTTGGATTCACTCTCCAGTTGGATGGGAAGACATGTAAAGATATTGATGAGTGCCAGA  
CCCGCAATGGAGGTTGTGATCATTTCTGCAAAAACATCGTGGGCAGTTTTGACTGCGGCTGCAAGAAAGGA  
TTTAAATTATTAAACAGATGAGAAGTCTTGCCAAGATGTGGATGAGTGTCTTTGGATAGGACCTGTGACCA  
CAGCTGCATCAACCACCTGGCACATTTGCTTGTGCTTGCAACCGAGGGTACACCCTGTATGGCTTACCCC  
ACTGTGGAGACACCAATGAGTGCAGCATCAACAACGGAGGCTGTGAGCAGGTCTGTGTGAACACAGTGGGC  
AGCTATGAATGCCAGTGCCACCCTGGGTACAAGCTCCACTGGAATAAAAAAGACTGTGTGGAAGTGAAGGG  
GCTCCTGCCCACAAGTGTGTACCCCCGTGTGTCCCTGCACTGCGGTAAAGAGTGGTGGAGGAGACGGGTGCT  
TCCTCAGATGTCACTCTGGCATTACCTCTCTCAGATGTCAACCACCATCAGGACAAGTGTAACTTTAAG  
CTAAATGAAGGCAAGTGTAGTTTGAAAAATGCTGAGCTGTTTTCCCGAGGGTCTGCGACCAGCACTACCAGA  
GAAGCACAGCTCAGTAAAAGAGAGCTTCCGCTACGTAACCTTACATGCAGCTCTGGCAAGCAAGTCCCAG  
GAGCCCCTGGCCGACCAAGCACCCCTAAGGAAATGTTTTATCACTGTTGAGTTTGAGCTTGAACTAACC  
AAGGAGGTGACAGCTTCTTGTGACCTGAGCTGCATCGTAAAGCGAACCGAGAAGCGGCTCCGTAAAGCCAT  
CCGCACGCTCAGAAAGGCCGTCCACAGGGAGCAGTTTACCTCCAGCTCTCAGGCATGAACCTCGACGTGG  
CTAAAAAGCCTCCCAGAACATCTGAACGCCAGGCAGAGTCTGTGGAGTGGGCCAGGGTCATGCAGAAAAC  
CAATGTGTGAGTTGCAGGGCTGGGACCTATTATGATGGAGCACGAGAACGCTGCATTTTATGTCCAAATGG  
AACCTTCCAAAATGAGGAAGGACAAATGACTTGTGAACCATGCCCAAGACCAGGAAATCTGGGGCCCTGA  
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CAGGCAATTACCCAGCCAACACCGAGTGTACGTGGACCATCAACCCACCCCCAAGCGCCGCATCCTGATC  
GTGGTCCCTGAGATCTTCTGCCATAGAGGACGACTGTGGGACTATCTGGTGATGCGGAAAACCTCTTC  
ATCCAATTCTGTGACAACATATGAAACCTGCCAGACCTACGAACGCCCCATCGCCTTACCTCCAGGTCAA  
AGAAGCTGTGGATTCAAGTCCAATGAAGGGAACAGCGCTAGAGGGTCCAGGTCCCATACGTGACA  
TATGATGAGGACTACCAGGAACCTATTGAAGACATAGTTTCGAGATGGCAGGCTCTATGCATCTGAGAACCA  
TCAGGAAATACTTAAGGATAAGAACTTATCAAGGCTCTGTTTGATGTCTTGCCCCATCCCCAGAACTATT  
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GGTGGGACAGAGCTGTCTTCTTCTGCATGTGAGCAGTCCGGTATGCTGCTCCCGTATCAGTGACTC  
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GTGGATGTAGACTGAGAATGGCTTTGAGTGGCATCAGCTTCTCACTGCTGTGGGCGGATGTCTTGGATAGA  
TCACGGGCTGGCTGAGCTGGACTTTGGTCAGCCTAGGTGAGACTCACCTGTCTTCTGGGGTCTTACTCCT  
CCTCAAGGAGTCTGTAGTGGAAGGAGGCCACAGAATAAGCTGCTTATTCTGAACTTCAGCTTCTCTAG  
CCCGGCCCTCTCAAGGGAGCCCTCTGCACTCGTGTGCAGGCTCTGACCAGGCAGAACAGGCAAGAGGGGA  
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AGAAAGAATTAGAAATAAATAAAAACTAAGCACTTCTGGAGACAT

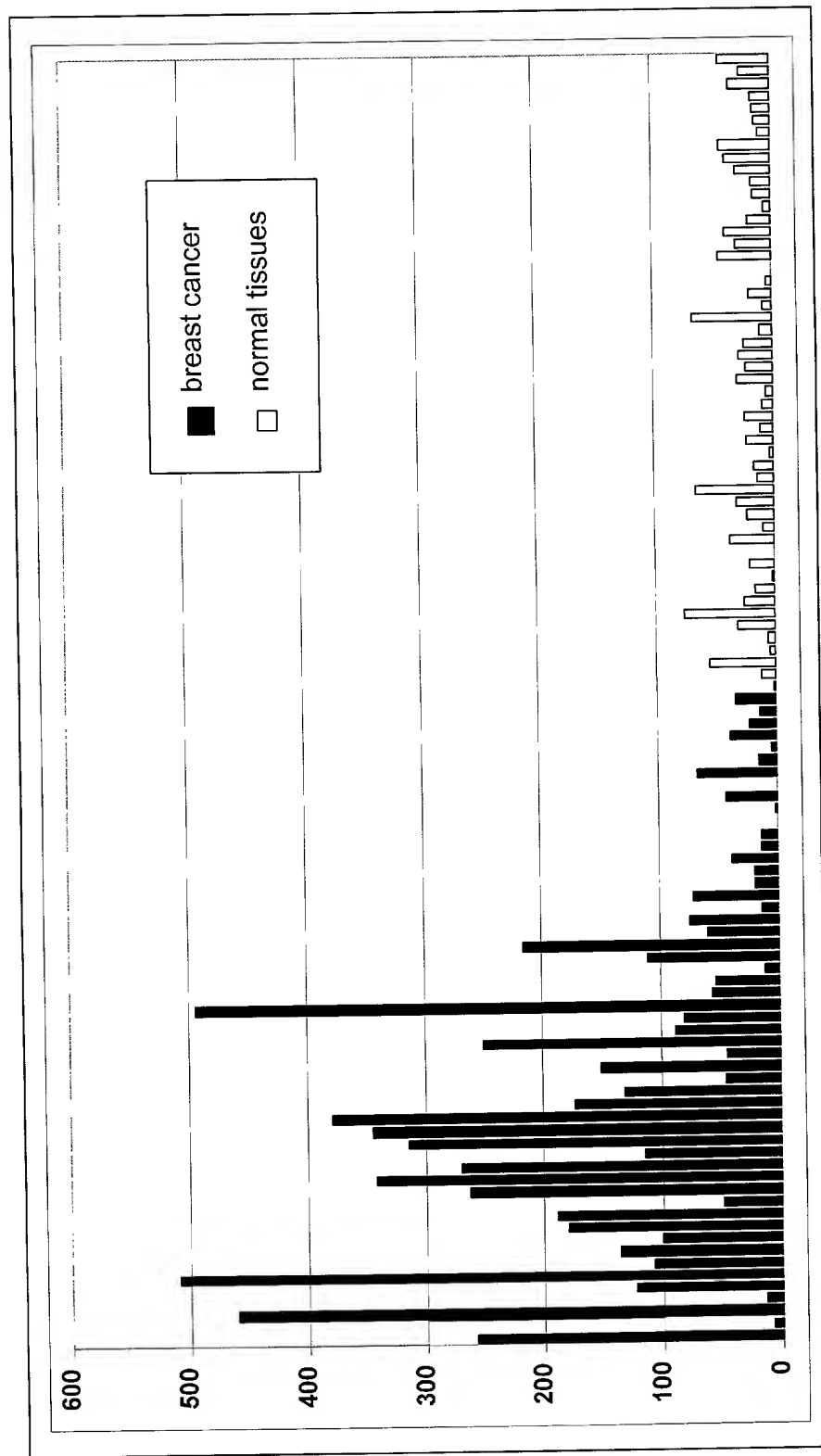
00747371.122100

# FIGURE 2

MGVAGRNRPGAAWAVLLLLLLLLPPLLLLAVPPGRGRAAGPQEDVDECAQGLDDCHADALCQNTPTS YKC  
SCKPGYQGEGRQCEDIDECGNELNGGCVHDCLNIPGNYRCTCFDGFMLAHDGHNCLDVDECLENNGGCQHT  
CVNVMGSYECCCKEGFFLSDNQHTCIHRSEGLSCMNKDHGCSHICKEAPRGSVACECRPGFELAKNQ RDC  
ILTCNHGNGGCQHSCDDTADGPECSCHPQYKMHTDGRSCLEREDTVLEVTESENTTSVVDGDKRVKRRLLME  
TCAVNNGGCDRTCKDTSTGVHCSCPVGFTLQLDGKTCCKDIDECQTRNGGCDHFCKNIVGSFDCGCKKGFKL  
LTDEKSCQDVDECSLDRTCDHSCINHPGTACACNRGYTLYGFTHCGDTNECSINNGGCQQVCVNTVGSYE  
CQCHPGYKLHWNKKDCVEVKGLLPTSVSPRVSLHCGKSGGGDGCFLRCHSGIHLSSDVTITRTSVTFKLNE  
GKCSLKNAELFPEGLRPALPEKHSSVKESFRYVNLTCSSGKQVPGAPGRPSTPKEMFITVEFELETNQKEV  
TASCDLSCIVKRTEKRLRKAIRTLKAVHREQFHLQLSGMNLDVAKKPPRTSERQAESCGVGQGHAE NQCV  
SCRAGTYD GARERCILCPNGTFQNEEQMTCEPCPRPGNSGALKTPEAWNMSECGGLCQPGEYSADGFAP  
CQLCALGTFQPEAGRTSCFPCGGGLATKHQGATSFDCETRVQCS PGHFYNTTTTHRCIRC PVGTYQPEFGK  
NNCVSCPGNTTTDFDGSTNITQCKNRRCGGELGDFGTGYIESPNYPGNYPANTECTWTINPPPKRRILIVP  
EIFLPIEDDCGDYLVMRKTSSSNSVTTYETCQTYERPIAFTSRSKKLWIQFKSNEGNSARGFQVPYV TYDE  
DYQELIEDIVRDGRLYASENHQEILKDKKLIKALFDVLAHPQNYFKYTAQESREMFPRSFIRLLRSKVS RF  
LRPYK

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FIGURE 3



# FIGURE 4A

BCO2_human	MGVAGRNRPGAAWAVLLLLLLLLPPLLLLLAGAVPPGRGRAAGPQEDVDECAQGLDDCHADA
BCO2_mouse	MGVAGCGRPREARALLLLLLLLLLPP--LLAAAVPPDRGLTNGPSEDVDECAQGLDDCHADA ***** . ** * *:***** ***,****.*: **.******
BCO2_human	LCQNTPTSYKCSCKPGYQGEGRQCEDIDECNGLNNGGCVHDCLNIPGNYRCTCFDGFMLA
BCO2_mouse	LCQNTPTSYKCSCKPGYQGEGRQCEDMDECNTLNGGCVHDCLNIPGNYRCTCFDGFMLA *****:*****:***.* *****
BCO2_human	HDGHNCLDVDECLENNNGGCQHTCVNVMGSYECCKEGFFLSDNQHTCIHRSEEGLSMKNK
BCO2_mouse	HDGHNCLDMDECLENNNGGCQHICTNVIGSYECRCKEGFFLSDNQHTCIHRSEEGLSMKNK *****:***** *.**:* *****
BCO2_human	DHGCSHICKEAPRGSVACECRPGFELAKNQDRCILTCNHGNGGCQHS CDDTADGPECSCH
BCO2_mouse	DHGCGHICKEAPRGSVACECRPGFELAKNQKDCILTCNHGNGGCQHS CEDTAEGPECSCH ***.*****:*****:***:*****
BCO2_human	PQYKMHDTGRSCLEREDTVLEVTESNTTSVVDGDKRVKRRLLMETCAVNNGGCDRTCKDT
BCO2_mouse	PRYRLHADGRSCLQEGTVLEGTESNATSVADGDKRVKRRLLMETCAVNNGGCDRTCKDT *:*:*:*****:*.*** ***:***.*****
BCO2_human	STGVHCSCPVGFTLQLDGKTKDIDECQTRNGGCDHFCKNIVGSFDCGCKKGFKLLTDEK
BCO2_mouse	STGVHCSCPVTGFTLQVDGKTKDIDECQTRNGGCNHFCKNTVGSFDCSCKKGFKLLTDEK *****.*****:*****:***** *****
BCO2_human	SCQDVDECLDRTCDHSCINHPGTACACNRGYTLYGFTHCGDTNECSINNGGCQQVCVN
BCO2_mouse	SCQDVDECLERTCDHSCINHPGTACACNPGYTLYSFTHCGDTNECSVNNGGCQQVCIN *****:***** **** *****.*****:*****:*
BCO2_human	TVGSYECQCHPGYKLHWNKKDCVEVKGLLPTSVSPRVLHCGKSGGGDGCFLRCHSGIHL
BCO2_mouse	TVGSYECQCHPGFKLHWNKKDCVEVKGFPTSMTPRVLHCGKSGGGDRCFLRCSGIHL *****:*****: ***.:***** *****:*****
BCO2_human	SSDVTTIRTSVTFLKNEGKCSLKNABLFPEGLRPALPEKHSSVKESFRYVNLTCSSGKQV
BCO2_mouse	SSDVVTVRTSVTFKLNEGKCSLQKAKLSPEGLRPALPERHSSVKESFYVNLTCSPGKQV ***.*:*****:*: *****:*****:*.*****.***
BCO2_human	PGAPGRPSTPKEMFITVEFELETNQKEVTASCDLSCIVKRTEKRLRKAIRTLRKAVHREQ
BCO2_mouse	PGALGRLNAPKEMFITVEFERETYEKEVTASCNLSCVVKRTEKRLRKAIRTLKRAAHREQ *** ** .:***** ** .:*****:***:*****:***:*.***
BCO2_human	FHLQLSGMNLDAKKPPRTSERQAESCGVGQGAENQCVSCRAGTYD GARERCILCPNG
BCO2_mouse	FHLQLSGMDLDMAKTPSRVSGQHEETCGVGQGHESQCVSCRAGTYDGSQERCILCPNG *****:***:***.*.*. * :*:***** *.*****:*****
BCO2_human	TFQNEEGQMTCEPCPRPGNSGALKTPCAWNMSECGGLCQPGEYSADGFAPCQLCALGTFO
BCO2_mouse	TFQNEEGQVTCEPCPRPENLGS LKISEAWNVS DCGGLCQPGEYSANGFAPCQLCALGTFO *****:***** * *.** .***:*.*****:*****
BCO2_human	PEAGRTSCFPCGGGLATKHQGATSFQDCETRVQCSPGHFYNTTTHRCIRCPVGTQPEFG
BCO2_mouse	PDVGRTSCLSCGGGLPTKHLGATSFQDCETRVQCSPGHFYNTTTHRCIRCPVGTQPEFG *.:*****:*****.*** *****:*****
BCO2_human	KNNVCSCPGNTTTDFDGSTNITQCKNRRCGGELGDFGTGYIESPNYPGNYPANTECTWTIN
BCO2_mouse	KNNVCSCPGNTTTDFDGSTNITQCKNRKCGGELGDFGTGYIESPNYPGNYPANSECTWTIN *****:*****:*****:*****
BCO2_human	PPPKRRILIVPEIFLPIEDDCGDYLVMRKTSSSNSVTTYETCQTYERPIAFTSRSKKLW
BCO2_mouse	PPPKRRILIVPEIFLPIEDDCGDYLVMRKTSSSNSVTTYETCQTYERPIAFTSRSKKLW *****

IQFKSNEGNSARGFQVPYVTYDEDYQELIEDIVRDGRLYASENHQEILKDKKLIKALFDV  
IQFKSNEGNSARGFQVPYVTYDEDYQELIEDIVRDGRLYASENHQEILKDKKLIKALFDV  
\*\*\*\*\*

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LAHPQNYFKYTAQESREMFPRSFIRLLRSKVSRLFRLPYK
LAHPQNYFKYTAQESREMFPRSFIRLLRSKVSRLFRLPYK
*****
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## FIGURE 4B

[illegible]